

(PCT Article 36 and Rule 70)

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/019693

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-2, 6-10 as originally filed/furnished
- pages* 3, 3/1, 4-5 received by this Authority on 08.09.2005
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 3, 6 as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-2, 4-5 received by this Authority on 08.09.2005
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets Fig. 1-6 as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement		
	Novelty (N)	Claims	YES
		Claims 1-6	NO
	Inventive step (IS)	Claims	YES
		Claims 1-6	NO
	Industrial applicability (IA)	Claims 1-6	YES
		Claims	NO
2.	Citations and explanations (Rule 70.7)		
	<p>Document 1: JP 2002-319686 A (Matsushita Electric Industrial Co., Ltd.), 31 October 2002</p> <p>Document 2: JP 10-200142 A (Yazaki Corporation), 31 July 1998</p> <p>(1) Document 1 sets forth a method of producing integrated thin-film solar cells, having a step of forming a molybdenum film 2 on an insulating substrate 1; a step of carrying out patterning on the molybdenum film 2 using a laser beam; a step of forming a laminated film 3 of a p-type CuInSe₂ thin film and an n-type CdS film; a step of carrying out patterning on said laminated film 3 by mechanical patterning; a step of forming a transparent conductive film 4; and a step of carrying out patterning on said transparent conductive film 4 by mechanical patterning (paragraphs [0004] and [0005]; fig. 5).</p> <p>Document 1 also indicates that it is known that an MoSe₂ layer exists at the interface of the aforementioned p-type CuInSe₂ thin film and the aforementioned molybdenum film (paragraph [0007]).</p> <p>(2) Document 2 similarly discloses a method of producing integrated thin-film solar cells, having a step of forming a molybdenum film 2 on a substrate 1; a step of</p>		

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

carrying out patterning on the molybdenum film 2 by laser scribing; a step of sequentially forming a CIS film 3 and a CdS film 4 on the molybdenum film 2, a step of carrying out patterning on the CIS film 3/CdS film 4 by mechanical scribing; a step of forming a ZnO film 5; and a step of carrying out patterning on the CIS film 3/CdS film 4/ZnO film 5 by mechanical scribing (paragraphs [0004] to [0007]; fig. 5).

Document 2 also sets forth a feature wherein MoSex and the like remain on the aforementioned molybdenum film 2 (paragraph [0008]; fig. 6).

(3) As stated in Box VIII, the wording in claim 1 "when forming the aforementioned light absorbing layer on the aforementioned metal rear electrode layer...divide up into thin-film solar cell unit cells" describes a production step, and the technical feature of this claim in relation to the item produced is unclear, and does not effectively delimit the invention of this claim.

Therefore the invention set forth in claims 1 and 2 is not substantially different from the inventions set forth in documents 1 and 2.

(4) Claim 3 sets forth second and third patterning steps, wherein mechanical scribing is carried out using an incidentally produced extremely thin film layer as a solid lubricant.

However, in the light of the description of this application (see for example page 8, line 22 to page 9, line 3 and drawings (fig. 1)), this step merely involves carrying out mechanical scratching using a metal needle, and is effectively no different from the mechanical patterning (scribing) carried out in the inventions set forth in documents 1 and 2.

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Therefore the invention set forth in claims 3 to 6
is not substantially different from the inventions set
forth in documents 1 and 2.

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Box No. VIII **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The wording in claim 1 "when forming the
aforementioned light absorbing layer on the
aforementioned metal rear electrode layer...divide up into
thin-film solar cell unit cells" describes a production
step, and the technical feature of this claim in relation
to the item produced is unclear.